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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,645	04/11/2001	Kouichi Satoh	9333/267	1752
757	7590	10/26/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			WOZNIAK, JAMES S	
			ART UNIT	PAPER NUMBER
			2626	

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/832,645

Applicant(s)

SATO, KOUICHI

Examiner

James S. Wozniak

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 7-15 is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the office action from 5/2/2006, the applicant has submitted a request for continued examination, filed 8/9/2006, amending claims 1, 8, 10, 14, 16, 20, and 21, while arguing to traverse the art rejection based on the amended limitations (*Amendment, Page 13*). The applicant's arguments have been fully considered and claims 1-5 and 7-15 are allowable over the prior art of record for the reasons given below, but with respect to claims 16-23 are moot due to the new grounds of rejection, further in view of Behr et al (*U.S. Patent: 5,808,566*).

### ***Claim Objections***

2. **Claims 21-23** are objected to because of the following informalities:

In claim 21, Line 10, "same meaning;" should be changed to --same meaning; and--.

Dependent claims 22-23 fail to overcome the minor informalities directed towards claim 21, and thus, are also objected to due to minor informalities.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 16 and 20-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ryzin (*U.S. Patent: 5,844,505*) in view of Martino et al (*U.S. Patent: 6,061,646*), and further in view of Behr et al (*U.S. Patent: 5,808,566*).

With respect to **Claim 16**, Van Ryzin discloses a vehicle navigation system and method utilizing a camera for performing image recognition on road signs for display to a driver (Fig. 1, Elements 12 and 20; Col. 3, Line 9- Col. 4, Line 22).

Although Van Ryzin suggests the use of speech recognition with a vehicle navigation device (*Col. 3, Lines 36-44*), Van Ryzin does not teach performing speech recognition to identify a user language in order to format a display output in the user's language, however Martino teaches a device and method that recognizes a user's speech, makes a language determination, and then supplies requested data to a user on a display in the spoken language (*language identification, Col. 2, Lines 21-37; Col. 5, Lines 11-23; and display formatted in a spoken user language, Col. 11, Lines 15-24*).

Also, Van Ryzin teaches the image recognition means, as noted above, for outputting a captured image of a road sign on a user display, while Martino teaches the language identification means for formatting a display output in a speaker's language as noted above. Van Ryzin and Martino are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin with the

language identification means taught by Martino to implement a multilingual information providing system enabling speakers of various languages to communicate with the device (*Martino, Col. 1, Lines 36-38*).

Although Van Ryzin discloses a means for road sign image recognition and display, and Martnio teaches formatting a display output based upon a speaker's language that is identified through speech recognition, Van Ryzin in view of Martino fail to disclose displaying an intersection name in a speaker's language. Behr, however, recites a navigation system that displays textual representations of intersection names in a language specified by a user (*Col. 5, Lines 32-44; Fig 6; Col. 20, Lines 21-25; and Col. 20, Line 53- Col. 21, Line 29*).

Van Ryzin, Martino, and Behr are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin in view of Martino with the guiding means taught by Behr in order to provide a more compact representation of step-by-step driving directions using intersections (*Behr, Col. 3, Lines 24-36*).

With respect to **Claim 20**, Van Ryzin discloses a vehicle navigation system and method utilizing a camera for performing image recognition on road signs for display to a driver (Fig. 1, Elements 12 and 20; Col. 3, Line 9- Col. 4, Line 22). Van Ryzin additionally teaches generating guiding speech for vehicle navigation (*Col. 3, Line 48- Col. 4, Line 17*).

Although Van Ryzin suggests the use of speech recognition with a vehicle navigation device (*Col. 3, Lines 36-44*), Van Ryzin does not teach performing speech recognition to identify a user language in order to format a speech output in the user's language, however Martino teaches a device and method that recognizes a user's speech, makes a language determination,

and then supplies requested data to as a speech output in the user's language (*language identification, Col. 2, Lines 21-37; Col. 5, Lines 11-23; and speech formatted in a spoken user language, Col. 11, Lines 15-24*).

Also, Van Ryzin teaches the image recognition means, as noted above, for outputting a captured image of a road sign on a user display, while Martino teaches the language identification means for formatting a display output in a speaker's language as noted above.

Van Ryzin and Martino are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin with the language identification means taught by Martino to implement a multilingual speech dialogue system enabling speakers of various languages to communicate with the device (*Martino, Col. 1, Lines 36-38*).

Although Van Ryzin discloses a means for road sign image recognition and display, and Martnio teaches formatting a display output based upon a speaker's language that is identified through speech recognition, Van Ryzin in view of Martino fail to disclose displaying an intersection name in a speaker's language. Behr, however, recites a navigation system that displays textual representations of intersection names in a language specified by a user (*Col. 5, Lines 32-44; Fig 6; Col. 20, Lines 21-25; and Col. 20, Line 53- Col. 21, Line 29*).

Van Ryzin, Martino, and Behr are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin

in view of Martino with the guiding means taught by Behr in order to provide a more compact representation of step-by-step driving directions using intersections (*Behr, Col. 3, Lines 24-36*).

With respect to **Claim 21**, Van Ryzin discloses a vehicle navigation system and method utilizing a camera for performing image recognition on road signs for display to a driver (Fig. 1, Elements 12 and 20; Col. 3, Line 9- Col. 4, Line 22).

Although Van Ryzin suggests the use of speech recognition with a vehicle navigation device (*Col. 3, Lines 36-44*), Van Ryzin does not teach performing speech recognition to identify a user language in order to format a display output in the user's language, however Martino teaches a device and method that recognizes a user's speech, makes a language determination, and then supplies requested data to a user on a display in the spoken language (*language identification, Col. 2, Lines 21-37; Col. 5, Lines 11-23; and display formatted in a spoken user language, Col. 11, Lines 15-24*).

Van Ryzin and Martino are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin with the language identification means taught by Martino to implement a multilingual information providing system enabling speakers of various languages to communicate with the device (*Martino, Col. 1, Lines 36-38*).

Although Van Ryzin discloses a means for road sign image recognition and display, and Martino teaches formatting a display output based upon a speaker's language that is identified through speech recognition, Van Ryzin in view of Martino fail to disclose displaying an intersection name in a speaker's language. Behr, however, recites a navigation system that

displays textual representations of intersection names in a language specified by a user (*Col. 5, Lines 32-44; Fig 6; Col. 20, Lines 21-25; and Col. 20, Line 53- Col. 21, Line 29*).

Van Ryzin, Martino, and Behr are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin in view of Martino with the guiding means taught by Behr in order to provide a more compact representation of step-by-step driving directions using intersections (*Behr, Col. 3, Lines 24-36*).

With respect to **Claim 22**, Martino teaches the display as applied to Claim 21.

With respect to **Claim 23**, Martino teaches providing a speech output in the language of a user as applied to Claim 20.

5. **Claims 17-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ryzin in view of Martino et al, further in view of Behr et al, and yet further in view of Ashby et al (*U.S. Patent: 6,081,803*).

With respect to **Claim 17**, Van Ryzin in view of Martino and further in view of Behr teaches the navigation system capable of outputting a road sign image in the language of a user, as applied to Claim 16. Van Ryzin in view of Martino and further in view of Behr does not specifically teach detecting map data in a storage medium in a user's language, however Ashby teaches map data storage means as applied to Claim 15, and further discloses searching for map data in a user's specified language (*Col. 19, Lines 26-58*).

Van Ryzin, Martino, Behr, and Ashby are analogous art because they are from a similar field of endeavor in information providing interface systems. Thus, it would have been obvious



to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Van Ryzin in view of Martino and further in view of Behr with the map reading means taught by Ashby in order to provide multilingual support for geographic map images in determining an optimum driving route (*Ashby, Col. 1, Lines 15-37; Col. 2, Line 61- Col. 3, Line 19*).

With respect to **Claim 18**, Ashby further teaches returning a base language name if there is no language entry in the storage means (*Col. 19, Lines 26-58*).

With respect to **Claim 19**, Ashby further discloses language-determining means (Col. 19, lines 6-12), a map reading device (18, FIG. 2, Col. 19, Lines 33-43), and a processor (map control unit) capable of accessing maps in memory buffer (RAM, 20, FIG. 1) and non-volatile memory (16, FIG. 1 and 30, FIG. 1). Once a user chooses a specific language, maps and maneuver directions will necessarily use the chosen language (*Col. 19, Lines 35-36*). Ashby also teaches the client-server environment as applied to Claim 7.

### *Allowable Subject Matter*

6. **Claims 1-5 and 7-15** are allowable over the prior art of record.

7. The following is an examiner's statement of reasons for allowance:

With respect to **Claims 1, 8-10, and 14**, the prior art of record fails to explicitly teach or fairly suggest, either individually or in combination, a vehicle navigation system and method which performs speech recognition on a user's speech, identifies the language of a user's speech through the recognized speech input, obtains an image of a road sign containing characters

indicating driving instructions or information using a camera and image recognition, identifies the language of the road sign characters, and translates the obtained road sign characters into the language of the user for display on a screen or output as synthesized speech, in combination with an intersection guiding means that contains intersection records, generates intersection guiding images in a recognized user's language, and generates intersection guiding speech.

Although Van Ryzin discloses a vehicle navigation system and method utilizing a camera for performing image recognition on road signs for display to a driver, Van Ryzin fails to disclose the intersection guiding means as specified in claim 1, nor makes any mention of intersection-based vehicle navigation.

While Behr does disclose intersection-based navigation (*Col. 5, Lines 32-44; Fig 6; Col. 20, Lines 21-25; and Col. 20, Line 53- Col. 21, Line 29*), Behr does not disclose that an intersection guiding means having a record including a plurality of intersection name strings in different languages, nor generating guiding speech corresponding to a displayed intersection image.

Thus, claims 1, 8-10, and 14 are allowable over the prior art of record.

Claims 2-5, 7, 11-13, and 15, further limit an allowable independent claim, and thus, are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


Ellenby et al (*U.S. Patent: 6,037,936*)- recites a method for translating signs captured by an electronic camera.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached at (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak  
10/10/2006



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